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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,653	04/15/2004	David D. Barone	P1830 US	2140

28390 7590 10/05/2007
MEDTRONIC VASCULAR, INC.
IP LEGAL DEPARTMENT
3576 UNOCAL PLACE
SANTA ROSA, CA 95403

EXAMINER

MCEVOY, THOMAS M

ART UNIT	PAPER NUMBER
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3709

NOTIFICATION DATE	DELIVERY MODE
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10/05/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

rs.vasciplegal@medtronic.com

Office Action Summary

Application No.

10/826,653

Applicant(s)

BARONE, DAVID D.

Examiner

Thomas Mcevoy

Art Unit

3709

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>15 April 2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is the initial Office action based on the 10/826,653 application filed on April 15th, 2004. No preliminary communications have been filed. Claims 1-14, as originally filed, are currently pending and have been considered below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-4 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Greenhalgh (US 6,375,670 B1) in view of Gilson et al. (US 6,336,934 B1). Greenhalgh discloses a tubular intraluminal filter, as best seen in Figure 1, comprising: proximal and distal ends (40 and 38), a longitudinal axis (18), a collapsed configuration and an expanded configuration (Figures 2a and 2b); the expanded configuration having a generally cylindrical body and adjoining proximal and distal sections that taper from the cylindrical body to proximal and distal filter ends, respectively (Figure 2b: when expanded against a vessel wall, as is the intended expandable state, the filter body

portion is generally cylindrical); wherein relative movement of the proximal and distal ends along the axis accompanies transformation of the filter between the collapsed configuration and the expanded configuration (coaxial movement of the filter ends accompanies expansion and contraction in Figures 2a and 2b; opposite axial movement in combination with coaxial movement accompanies expansion and contraction in the Figure 5 embodiment); the filter comprising: a first array of braided filaments extending proximally from the filter distal end to a proximal terminus within a junction region between the cylindrical body and the tapered proximal section (30); and a second array of filaments inter-braided with the first array and extending a full length of the filter, wherein the filter proximal section is defined by two or more strands (32); wherein the filter proximal section has two or more inlet ports defined by open spaces between the two or more strands (42); wherein filter pores are formed by interstices between the braided filaments (34); wherein the proximal terminus of the first array is coupled to the second array by a retention member comprising joints formed where filaments of the first array overlap filaments of the second array wherein the joints are formed by one or more joining methods selected from adhesive bonding, heat bonding, melt bonding, soldering, brazing, welding, laser welding, resistance welding, and spot welding (column 6, lines 43-45); wherein the filter has a shape memory of the expanded configuration and has a shape memory of the collapsed configuration (see Abstract); a filter catheter comprising a flexible elongate shaft and a filter as described above mounted about a distal end of the shaft (20), and an actuation system for causing relative movement of the filter proximal and distal ends along the longitudinal axis of the filter which is connected to a flexible elongate shaft (figures 2a and 2b).

Greenhalgh does not disclose that the filaments of the second array are intra-braided to form two or more strands in the filter proximal section. Gilson et al. disclose a filter of similar structure to Greenhalgh as well as the claimed invention, as best seen in Figure 39, where the strands of the proximal section are intra-braided together into two or more strands. It would be obvious to one of ordinary skill in the art, having the

Art Unit: 3709

teachings of Greenhalgh and Gilson et al. before him or her, to intra-braid the filaments of the second array, in the proximal section, to form two or more strands.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Greenhalgh (US 6,375,670 B1) in view of Gilson et al. (US 6,336,934 B1) as applied to claims 1-4 and 6-10 above, and further in view of Brooks et al. (US 6,346,116 B1). The combination of Greenhalgh in view of Gilson et al. teaches the invention discussed above but fails to teach a retention member comprising an elastic encapsulating ring. Attention is directed to the Brooks et al. reference which discloses an intraluminal filter, as best seen in Figure 5, of similar structure as described above but further including an elastic encapsulating ring member (84) which joins the proximal filaments to the distal filaments, where the filaments may be interwoven and of the same material (column 4, lines 36-40), at a central junction region (the sleeve as claimed has been disclosed to possibly have a short length along the circumference of the junction region, Detailed Description, paragraph 25, therefore a ring-like member would be embodied by this disclosure). Therefore, it would have been obvious to one having ordinary skill in the art having the teachings of Greenhalgh, Gilson and Brooks before him or her to use an elastic encapsulating sleeve to couple the proximal and distal filter sections together in order to increase the strength of the junction.

6. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Greenhalgh (US 6,375,670 B1) in view of Gilson et al. (US 6,336,934 B1) and further in view of Molgaard-Nielsen et al. (US 4,619,246). Greenhalgh discloses a method for making the filter comprising: braiding multiple filaments to form a filter precursor tube (Figure 8, top two boxes); demarcating tube regions that are intended to become a proximal filter section, a cylindrical filter body, and a junction region there between; severing selected filaments at the junction and removing severed filaments from the proximal filter section (Figure 8, third and forth box from top; gathering the ends of a filter tube and removal of filaments from a proximal end implies a determination or

demarcation of tube regions intended to become the proximal, cylindrical and junction regions as claimed).

Greenhalgh does not disclose dividing the un-severed filaments in the proximal filter section into two or more groups; intra-braiding each group of filaments into a corresponding strand; and heat-treating the filter to set a selected shape thereof. Gilson et al. disclose a filter of similar structure to Greenhalgh as well as the claimed invention, as best seen in Figure 39, where the strands of the proximal section are intra-braided together into two or more strands. Gilson et al. further disclose that the filter material could have shape memory to the expanded state (column 6, line 33) where heat treatment is a known technique in the art for obtaining shape memory characteristics for intraluminal filters as taught by Molgaard-Nielsen et al. (column 1, paragraph 3). It would be obvious to one of ordinary skill in the art, having the teachings of Greenhalgh, Gilson et al. and Molgaard-Nielsen et al. before him or her, to intra-braid the filaments of the proximal section to form two or more strands as taught by Gilson et al. (in order to increase the longitudinal strength of the filter) and further heat treat the filter as taught by Molgaard-Nielsen et al. (to set a desired shape).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Mcevoy whose telephone number is 571-270-5034. The examiner can normally be reached on M-F, 7:30-5:00 (alternate Fridays).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joe Del Sole can be reached on 571-272-1130. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Art Unit: 3709

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


JOSEPH DEL SOLE
SUPERVISORY PATENT EXAMINER

10/1/07